Sustaining Colleges and Universities through Community

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By

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Dedicated to Soul and Colleen Wright.
I couldn't be prouder of my amazing family!

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FOREWORD

Colleges and universities have become woven into the American way of life in unique and interesting ways. They are institutions that educate and innovate. The first step for almost all of tomorrow's leaders is a 4-year degree that molds and shapes them for success – and hopefully all of our successes. They have also become the center of scientific research and other key pursuits. Colleges and universities are the center for these vital industries that are necessary for a modern society to thrive. So much of our economy and society depends on these organizations. They are entrenched in our communities. They are so important to a 21st century America.

While the value of education – and even its necessity to many careers – is well-known, college comes with a hefty price tag. A large portion of the population view it as unnecessary, over-expensive, and politically out-of-touch. People are questioning the value of higher education. Many of these colleges and universities are in trouble and are at risk of folding. To some on the outside, their main purpose is to provide an over-bloated credential that is currently used to gatekeep people out of careers that they may already be qualified for. One might even agree with this sentiment in many circumstances: consider a detective with 20 years of experience who is told she cannot become a chief until she gets a degree. Then she goes to pursue that degree costing $35,000 per year and her first classes are poetry, environmental studies, history, and mathematics. It's not that those classes aren't valuable activities, but the whole reason she is in college is to get that degree so she can be promoted. In that case, higher education doesn't *appear* to make sense for her, does it?

Let me be clear, I am a professor and I love the liberal arts. It is one of the reasons I took a job working at a small liberal arts school. I – like many professors – understand that there is value in exploring history, sociology, science, mathematics, economics, etc. And in fact, all of these subjects are interconnected in unexpected ways. They teach us valuable lessons and provide us with skills to be successful in our lives. While it is highly non-linear, learning about subjects not directly related to one's career can have a meaningful impact and even be life changing, especially in a world that is reinventing itself every day. That said, it's a tricky balance between meeting the perceived needs of the students and also providing them a well-rounded education that will help them prepare for a future of unknowns and career

changes. And it is all in flux and continually changing as the world changes. Somehow, some way, higher education needs to progress with the times.

And doing this while keeping costs under control is very difficult. Still, as a former management consultant, the thing that drives me absolutely bonkers is how inefficient colleges and universities are. All of these inefficiencies have been rooted out in most of corporate America, for better or worse. After years of driving innovation around the world and beyond in almost every field of human pursuit, higher education as a whole has somehow maintained a nearly static inefficient infrastructure. Although the recent pandemic has forced colleges and universities to become more efficient, there is so much red tape and duplication of effort. It's difficult for colleges and universities to take meaningful action to fix their issues and keep up with the times. While all of this bureaucracy does provide jobs for people, it puts these costs onto the students who are paying a lifetime investment in their future. College ain't cheap!

To make matters seemingly worse, higher education was shaken by the pandemic and many schools closed due to low enrollment. It has forced universities to look inward at their own operations in order to cut costs; while likely a good thing, in this case many decisions were often made out of necessity and not out of any carefully thought out plan. In some cases, it required colleges and universities to painfully find ways to reorganize themselves, and in more than a few cases, forced college and universities to fold up and disappear entirely. According to a report by the Chronicle of Higher Education titled *Surviving as a Small College* (Gardner 2023), small colleges are in trouble and they are looking for solutions. Here is a list of colleges and universities that went under in recent years, from an article in bestcolleges.com titled "Closed Colleges: List, Statistics, and Major Closures" (Castillo 2024). Keep in mind that this list ignores all of the schools that merged, which is itself a beefy list:

2024
- Johnson University Florida, Florida
- Cabrini University, Pennsylvania
- The College of Saint Rose, New York
- Magdalen College, New Hampshire
- Hodges University, Florida
- St. John's University, Staten Island, New York

2023
- Alderson Broaddus University, West Virginia
- Alliance University (Formerly Nyack College), New York

- American University of Puerto Rico, Puerto Rico
- Medaille University, New York
- Presentation College, South Dakota
- Hussian College, Tennessee campuses
- Bloomfield College, New Jersey
- Cardinal Stritch University, Wisconsin
- Holy Names University, California
- Iowa Wesleyan University, Iowa
- Finlandia University, Michigan
- Cazenovia College, New York
- ASA College, New York
- Chatfield College, Ohio

2022
- Quest College, Texas
- Stratford University, Virginia
- Marymount California University, California
- San Francisco Art Institute, California
- DeVry University, Several campuses nationwide
- Wave Leadership College, Virginia
- Lincoln College, Illinois

Higher education is in trouble. It is a miserable time for higher education. There have been layoffs, strikes, restructuring, mergers, etc. This all causes system-wide stress.

Tough times can lead to exciting innovations. Higher education has an opportunity to innovate and regain its respected leadership role in society. There is an opportunity to get at serious structural problems that have faced academia for years and allow us to innovate solutions – something that is desperately needed in higher education, and has been needed for some time. The result of this will be a stronger, and hopefully more effective, system of colleges and universities.

There is a word of warning here. While change and innovation are needed to save our struggling local and regional colleges and universities, it is important to note that successful approaches in one segment of higher education don't automatically lead to success everywhere. What might be good for Harvard might not be good for Western Connecticut State University. It is important to devise a plan for higher education in the best interest of society as a whole, not just our elite schools. We have to think before we act. We just can't willy nilly copy what Yale or Stanford do.

Attempting to reproduce the successes made by elite schools may or may not work in our second-tier and third-tier colleges and universities. The elite schools have different problems, issues, students, and resources. We have to be bold and unafraid to innovate from the bottom up. Not all solutions need come from the elite schools. For example, while many colleges and universities were being forced into closure, the biggest news of 2023 in higher education seemed to be centered around Harvard's president. Did she say the right thing on Capital Hill? Did she plagiarize? Was race a factor in all of the hatred she experienced? All good questions, but entire schools were closing!

Whether we like it or not, change in higher education is coming! With both the system-wide inefficiencies and the unbelievable amount of money associated with tuition dollars, higher education is ripe for the plucking by tech firms from Silicon Valley. There is a king's ransom awaiting an organization that can simultaneously attract companies willing to hire their students, get high school students willing to sign up, obtain all of the legal requirements, and do it all cheaply with online education.

It's a tall order.

Don't believe it's possible? It is.

Consider that almost all of higher education spent six months to a year completely using remote learning during the pandemic. It wasn't pretty at all but it was done, which shows that it is possible. There was a lot learned during that brief time. We have to be careful, or colleges and universities will go the way of taxis after Uber hit the scene. While there are always winners and losers, this is something that is likely going to be very bad for the communities that these colleges and universities reside in, as a whole.

We need to keep our colleges and universities local. It is our belief that local and regional colleges and universities provide lifeblood to communities as a whole. Think about all of the corporate communities associated with a university. We need to take advantage of potential relationships between colleges and corporations to deeper embed the university into society, but we can't stop there.

We need to rebuild the institution so that it has a direct and meaningful impact for the average person on main street on multiple levels. We must deeply imbed these schools into our communities and then share their impact.

Members of the community should have more than one direct contact with the university. They should feel comfortable at the university and know it is a place for them. There should be activities that connect students/campus life to anyone interested in learning. There should be opportunities for members of the community to learn beyond the traditional education. It should be a

safe place where members of the community can come and feel welcomed. We must not only think about the good of students, but also the good of communities.

While the coming innovations to colleges and universities at the national level, which will likely take the college and the university out of the community, might be ultimately better for a few students, we want to make sure that changes are good for as many students as possible. We want local and regional colleges and universities to be strong, positive places for students to learn. To do this, I will argue throughout this book, local and regional colleges and universities must strengthen their bonds within their communities.

Colleges and universities are vital to local communities!

If these local and regional colleges and universities go under, it will have long term consequences for the communities they reside in. It is critical that these local and regional schools continue to innovate to maintain their place in the market as higher education transforms.

This book discusses how smaller colleges and universities can remain/become vital their communities, and in so doing—thrive.

Before I begin, please let me share with you some information about myself and my thought processes. I am a physics professor at a small university in Long Island, NY. My expertise comes from a number of different topics in atomic physics. I also lead a small physics department.

What is unique about my career is that I have spent time as a management consultant. I spent time considering and evaluating strategic operations of transportation companies, another industry that is undergoing a sudden and not so graceful change. The experience has had a critical influence on me. And I am an unlikely professor, having grown up in a fractured family from a blue-collar city. This also had a powerful influence which add to my perspective of higher education as an industry.

These are ideas. I encourage readers to try them out and innovate many more. This is just the start of the conversation. We need to get to work if we want to save local and regional colleges and universities, and right now! In the first few chapters I will discuss problems with higher education and the world as a whole, and then move into some recommended solutions. As with any solution, they are only "proven effective" after a long-term, data-driven evaluation process. This book does not consider this. It does, however, explain the problems and starts the very important discussion of how we might start to solve it.

Let's get to it!

ACKNOWLEDGEMENTS

1

UNDERSTANDING HOW COLLEGES AND UNIVERSITIES DON'T SERVE THEIR STUDENTS

Institutions of higher education have become the mandatory stopping point for young adults who have completed high school and are looking to better themselves. On the surface, it seems that there are only two choices for an eager recent high school graduate: go to college or go to the military. This is of course not a binary choice. There are in fact other avenues that lead into successful adulthood, for example becoming an electrician or a plumber. However, so many students are pushed into college right after school. Depending on how you look at it, this "problem" is a societal issue that has become a problem for higher education, as many former students likely blame universities and colleges for student loans accumulated getting the degrees they don't need.

What am I complaining about? It puts food on my table and pays the bills. I am a college professor, after all. I obviously would still like college to continue to be a destination for young adults. But I do ask the question, do local and regional colleges and universities support their students? Their community? Are our students getting the maximum return on their investment? For many students the answer is most definitely yes, but there are others for whom the benefits aren't so clear.

Consider the lack of retention in college. It sometimes feels like a race to the top, which unfortunately many people lose. One of the more frustrating things about being a professor is dealing with the reality of student situations. Every year, I get a new group of eager students who want to be astrophysicists, rocket scientists, and civil engineers. I hear stories about how they loved putting together Legos when they were a kid and how they have always dreamed of being an adult who gets paid to do this kind of thing. Honestly, I love the energy.

But for a host of reasons, I, unfortunately, know that this excitement is short-lived. Soon these students will run across a calculus class that they struggle with, a professor who pushes them in the wrong way, a struggle with self-motivation, or some life event that they are unable to process

within the timeframe of one semester. These students will fall behind. They will struggle. And they will leave, sometimes to other majors and other times they will lose altogether and leave college. Retention is something I spend a lot of time thinking about, and every year there are a list of students who slip. Consider for a second the following statistic, "The 6-year graduation rate was 62 percent at public institutions, 68 percent at private nonprofit institutions, and 26 percent at private for-profit institutions." from the National Center for Educational Statistics (Hussar 2020). Looking at this through another lens, that means roughly 40% of all college students don't graduate! Let's rephrase this, **almost half of the college students don't make it!** This statistic hits me really hard every time.

For the students that don't make it through college, the situation is terrible. They have accumulated college debt, likely in the tens of thousands of dollars, yet they do not hold a degree to benefit from their time in college. I assume that they are upset about their experience and do not appreciate the full extent of what they miss out on. Unsurprisingly, I predict they will vote against higher education and have a generally negative opinion of colleges and universities. I mean they were scammed, right? Now, expected to likely work really hard for a lifetime, continually with debt, so even as they become a full adult, they still can't get past this one or two years of failed college. Thousands of dollars spent on something that seems more or less meaningless, looking back on it. Quite literally a waste of time. Prospects for promotion and high salary are limited, but they are still swamped with debt, ultimately losing out on whatever benefit a young adult who bypasses college could gain by going into the workforce directly. Higher education is failing these 40-percenters. That is a lot of people, and we rarely talk about them. To be perfectly clear, this is not to imply that the students don't own some of the responsibility, but with numbers so large, this likely does represent a system-wide problem.

Of the remaining 60% of students who do make it through college, not everyone substantially benefits from their time there, in a career sense. For my students that change majors into something other than physics, it can ultimately be a great thing. A realization of another passion or the fulfillment of a known one. So many students go into physics and engineering because their parents insist on a valuable career. As a professor, it is surprisingly not rare to find someone who has a passion for music or art going down the engineering path because their parents believe one cannot have a career in their preferred field. And it's not just the parents, there is a whole industry of pseudo-evidence-based evaluations of colleges, universities, and careers (e.g., U.S. News College Rankings). Susceptible young adults listen and try to make the best decision that is going to give

them the best life possible. I'm a 48-year-old successful tenured professor at an amazing college and I have no idea what I will be working on in five to ten years, how the hell does an 18-year-old make that decision? Of course, some students make it exactly as planned, and we put their pictures on our brochures. This is good advertising, but aren't we exploiting folks here? It's like we are somehow saying, come to our university and everything will be perfect. Everyone is having so much success and everyone is perfect. This is the college system we all support.

Our world increasingly protects our children and doesn't give them the freedoms that children of past generations had. Arguments can be made either way as to whether this is a good or a bad thing. However, this can manifest itself in a negative way when these same students get to college. College students are wholly responsible for their own education. Often times, this is going to have to be in spite of their professors, not with the support of them. The students have to do the work. The students have to own responsibly for the outcomes. Students have to choose a major. The parents and professors have to get out of the way. Even still, students aren't always going to make the best decision for themselves. Especially when one considers that this may be the students' first touch of freedom in their lives. It's a mess.

On top of this, the higher education system continues to filter and sort our college students. Some get ahead, but others get pushed back. How this filtering happens depends on a host of factors, some of which a college student doesn't have control over.

Consider that medical schools only take about the top 40% of students who apply into their programs according to the Association of American Medical Colleges (AAMC) (AAMC 2024). What happens to everyone else? And there has been a tremendous amount of filtering that has gone on before that. Consider that the average science GPA is about 3.5 for applicants, whereas the average GPA on campus tends to be around 3.2. That means that the applicant pool is already generated from the top 20% best students. This leads students into a giant race to see who can get the highest GPA, and students are willing to do whatever they can to achieve it. All one has to do is to see the line of students outside of my office after students get back their first physics exam in college to see this effect in action – the students are there lobbying for every extra point they can get their hands on. So, to recap, there are a ton of students who sign on to be doctors, but only a handful of them make it. Is the system helping all of our students?

This is not only true for medical school, but it is also true across the board in college for various programs. A somewhat arbitrary measure of success is created (e.g., GPA) for entrance into something that will set them

up for further success in life (e.g., law school). Many students will stop at nothing to make a good GPA happen.

On the surface, one might think that this is a good thing. Getting good grades is a good thing, right? We are only creating the best doctors, lawyers, etc., right? The elite are only the best students. But there are problems with this. The book *The Meritocracy Trap* illustrates how meritocracy leads to all-out class warfare, which give wealthy students a significant edge over non-wealthy students because they have access to additional resources, training, and life experiences that push wealthier students over the edge toward high milestones (Markovits 2019).

Students get to the top for lots of reasons. It seems though that opportunity, preparation, and management of the system are ultimately more important than potential, intelligence, or hard work. A single bad grade as a first-year student, in a class a student isn't prepared for, could be a deal breaker. The success has everything to do with their circumstances and savviness. These are things that can be given by wealthy parents and can be difficult to manage for poorer students who are out of the loop. There is no standard for fairness and this class warfare is focused in and around our colleges and universities.

Many students are locked in a battle to beat their peers. Their goal in college is to get the best credentials as possible to get them into whatever opportunity they are interested in (or being pushed into). Unfortunately, the starting line for each student is not the same, and yet everyone is expected to be done in 4 years and sometimes even less as finances are tight. Some of my students walk into college with mastery of higher-level math like multidimensional calculus, whereas others start college with little to no calculus and very weak math backgrounds. More often than not, this is about the zip code the students grew up in and not about how hard they work or how smart they are.

The big question is, "so what"? When your heart gives out you need to have a surgeon that knows what she is doing, right? When you go to the doctor's office, you literally don't care how that doctor got to where they are, they just need to be able to save your life. So, if whatever we have naturally come up with generates the best surgeons, one might look the other way at some of the iniquities. Homeboy needs to live, right?

Does the current system generate the best surgeons? I don't know and suspect that answering this question is beyond the scope of this book. However, what I can be sure of is that the college student who is managing their GPA so that they get a 4.0 by taking the easiest possible pathway through college isn't maximizing their learning opportunities. They are managing the system. I suspect that if the student challenged themselves

more, they might be more innovative and learn more with their time. Of course, if it is my heart, I might want a straight A student who never makes mistakes at the helm. I don't know.

Unfortunately, what I feel that college students quickly learn is that college isn't about learning. This is a critical point! One might expect that college and university is about learning and challenging oneself. But so many times, the winners are the best managers of their career path. We expect college to be a time of growth, but it seems to be more about a time of solidifying inequity.

When I was a teaching assistant (TA) at an elite school, I was told by the university leadership that it's ok to give everyone an A, because well, they are the best students and just getting into that elite school was enough. The other TAs gasped when they heard this. When I taught in the honors college at my current college, I was told by students that everyone gets an A in class. Obviously, the faculty didn't agree with that statement. But with a little digging, I found that it was mostly true. There was a moderate level of expectation of work in their classes and students, in general, optimized this so that they could do as little as possible and still get an A in class.

Let me be clear, this is not to blame the students or the professors. The students that want these amazing opportunities need to be successful completely, all of the time. There is little room for Bs, or even A-s.

One of my peers asked me once if I had a problem with hard-working, smart people because I get so worked up over people who get straight As. I don't. Most of the time, people who get straight As are amazing. I am a big fan of awarding people with merit. Outcomes are important. And the work done by elite students can be substantially better than other students.

The journey is important too.

Shouldn't there be a pathway for a student from a poor neighborhood who doesn't have the same resources?

Getting into medical school is hard. In addition to being a great student, candidates must also do internships, shadow senior doctors, volunteer, etc. It is not an easy road by any stretch of the imagination. Sometimes as a physics professor, when I teach one of the harder classes the pre-meds take, I feel like the Grim Reaper coming to take away their dreams when I give them a lower than expected grade and I strive for a B/B+ average grade in my class.

Some professors try to use a fixed grade scale. This is especially true in math and sciences, where correct answers can be compared in an absolute way. These courses often become a true test for many students. Some students conquer this by getting extra help right at the beginning of class, others will free their schedule so they have even more time to take the class,

and still others will try to take the course with another professor (or over the summer) with an easier grading scale. To be clear, none of these are bad. These are smart decisions made by students who are trying to manage their futures. Even one D or F can derail the entire process. But again, I say *manage* and not *learn*.

We are not encouraging fighters and innovators!

Wait, don't we go to college to learn?

There is one funny example from one year I taught an honors college course. Students had turned in reports that were long and well written from a language sense; however, the "meat" of the answers were missing and one could tell that many of them were bullshitting me. They didn't really dive into the complexity of the problem that I gave them. They just wanted their A and figured long and well-written answers were the way to get it. I caught it. I laughed at it. Really, grades are arbitrary, right? I told everyone in the class they got a C on their assignment. I explained what was missing and told them that if they redid the assignment doing what I asked they could in fact get an A on it. Ok, this was kind of an asshole move, but most of the class redid their assignment, got high marks, and hopefully learned something in the process. However, there were a few students that saw the C and immediately dropped the class. One student came to my office and asked me to calculate the probability she would get an A in my class. It was still pretty high, as all she had to do was redo the assignment. I told her I would help her and that she could work with other students in the class. But she couldn't see beyond her temporary grade, and ultimately dropped the course. She had never gotten a C in her life and she "worked hard for her grade point average." She did of course, but withdrawing at the first sign of trouble is exactly what I am talking about when I say managing their classes. A few months later, I saw her while I was getting off a train. I went to go say hi. She literally ran in the other direction. I internally laughed. She must have been really afraid of the C.

Of course, all of this isn't a laughing matter. All of our elite students are working themselves to the ultimate max. Any hiccup and it's over. They literally believe that their lives are on the line. I can't tell you how many straight A students I have talked to who couldn't bear getting a B in a class. And if they did, they would consider taking their own lives. But the reality is that because we live in a meritocracy, we are playing a giant king-of-the-hill tournament, where eventually all but one person (or a small handful) will lose and have to deal with that. Even the person on top will eventually lose, just because so many amazing people are competing. We should be

teaching resilience and not perfection. And how can you build community when everyone is fighting to be on top in a do-or-die competition? This is what the college we built looks like.

Students should be rewarded for trying to solve difficult messy problems with no obvious solutions. Students should be encouraged to use their full range of intelligence and creative powers to find solutions to interesting, challenging problems. It should be hard. Of course, you want to reward students who are working hard and are amazing. But you also want to reward people who are willing to try new solutions and quickly learn. We do want people who can take on intellectual challenges in our elite. And we want people in the middle and lower levels to feel that they can catch up.

So many times, I will get a student who refuses to hand in homework early in their career and then get involved in some research project and do amazing. Later these people go on to become successful employees. It perplexes me as a professor. You would think that not doing homework would be an indication of poor work performance. Maybe what we are doing in class doesn't align with what's expected in the workforce. And we should look at that. Again, in addition to learning, isn't school supposed to be practice for the real world?

In general, I feel that people don't understand the value of their education. They feel that college, the experience, is just about getting some big fancy credential that says you are smarter than everyone else. That makes me sad of course. Colleges and universities have a unique opportunity to expose people to new ideas and help them roar out into the world as innovators and change-makers. Instead it is all about training people to be middle managers. For a time, this was fine. Our workforce demanded more and more middle managers. However, as industries automate more of their businesses, the roles for middle managers are decreasing. More and more, we need brilliant flexible people who can morph into whatever role is needed. We need people to think critically.

College is more than the credential. Unfortunately, many people only see the credential. To them it is the most important piece of college. How many times have you heard, "Oh, I would apply to be the boss but that position requires that I have a master's degree. I guess I am not good enough." We have to stop doing this. The degree one holds is not an absolute indication of how good you are or how smart you are. There are people who have gained knowledge and experience that would make them perfect for such a job and they don't have a master's degree. A good master's program should be an optimal way to learn a diversity of topics that would make you valuable in a higher-level job. But saying the degree is a requirement, minimizes the fact that a person could gain that experience in other ways,

helps to set a further tiered society, and puts an over emphasis on the credential. Of course, this credential system is what the universities support.

People have told me in my career that so-and-so can't handle that task because they do not have a Ph.D. There was nothing about Ph.D. training that says I would be a particularly good at obtaining money for university projects, would know how to manage people in a department, or teach for that matter. My Ph.D. was almost exclusively centered around driving ultracold atomic collisions with frequency-chirped lasers. To be 100% clear, this was an awesome project that I am proud of but, we were only using one atom type and one kind of laser. It was a very narrow project, as with almost everyone else's dissertation.

That is not to say that I didn't learn from this experience and it wasn't an amazing educational and transformative experience. It was worth the time and effort and gave me a wonderful start to my career. The experience has also made me highly employable in a variety of career paths. But there are individuals who clearly got to where they are because they're qualified on paper yet can't do the job they were hired to do. This happens in our colleges and universities. It says a whole lot about how much time they spent being "educated," but little about how good they might be at a job such as teaching. For example, you are never taught to be a teacher in doctoral school. This builds hidden inefficiencies into higher education. Skills like perception, intuition, and patience are required. It would be nice to assume these incapabilities are screened out before ever being hired, but as we've discussed, there are too many other factors at play there. For example, faculty are often hired for their ability to conduct research or their success in one particular field. The ability to teach is often minimized. This happens at elite universities where faculty spend a large amount of time doing research, and thus is both understandable and somewhat unfortunate. But the fact that this happens at smaller teaching colleges is downright bizarre, if not insane.

One thing that I find particularly frustrating at colleges and universities are pre-professional programs. It's an idea that is marketed to high school students by the colleges. You attend a particular college and complete a set of courses/majors (often intense courses) and obtain entry into professional or graduate school. Retention in these programs tends to be low because they are often a reach for the student.

I know a little something about them. I have developed one of which I am currently the director. I have considered developing two-to-three new ones, and my university's own physics program has a wildly successful connection with an elite university. After spending three years at our

college, they can move over to the elite university to get an engineering degree from the elite school and a physics degree from our university.

At the surface something like this seems like a wonderful idea. A student signs up for physics, takes three years of classes, reflects on their future, gets a little extra time to grow up, and gains a unique prospective on life. They might decide that they would prefer a more applied or hands-on career than being a physicist and head off to study engineering. This would give that student more opportunities and likely introduce diversity into the engineering school. And in this sense, these programs are amazing, especially when you consider how much the quality of one's graduating school is in terms of employment in the future and the lack of diversity in many STEM fields. That's the plan, anyway.

The reality is sometimes different. It is hardly a program that students wander into. In fact, students need to come into the program directly from high school and need to be intentional about the classes they take. Nearly all of their college career is mapped out and pre-planned, often before they take their first class. One course mistake in a student's freshman year can have lasting consequences. Of course, it is still possible to deviate from the plan and make it. However, deviations add limits to what can be done and make it exponentially harder to complete. It's about managing one's degree, unfortunately.

Again, a high GPA is required to complete these programs. Even one bad semester can derail you. The elite schools want perfect students. They are not looking for students who fail and then adapt. (Aren't these the people we want in society? People that can learn from their mistakes and grow? Shouldn't these be the people we want coming from our universities?) This often comes about due to GPA policies. Consider a student who was a hot head when young and didn't appreciate how important homework was going to be in a college physics program, and gets a D in both physics and calculus class that first semester. At 18 years old we are all bound to make some silly decisions. Even if they got the best possible grades for all of their other classes – highly unlikely – the best they can do is a 3.7 GPA. That is a good GPA that would open most doors; however, it is more likely that they will struggle at least a little. At that point just doing average isn't going to be enough if they want to open doors for their career. In my time as a professor, I have seen students have bad semesters for reasons not just limited to being a punk. Other reasons include having to take care of siblings while parents worked, parent(s) passing away, sexual harassment, parent losing job, homelessness, and the list goes on and on, unfortunately. Colleges and universities rarely support these types of students. While we often have this image of a sleepy fraternity bro or sorority sister who drinks

too much five nights a week, the reality of our college students can be much different.

College should be a time to explore, and that should be okay. Unfortunately, these pre-professional plans tend to be very inflexible. Consider that nearly 30% of college majors change their major (Lederman 2017). We are continually promoting these pre-professional plans and 30% of students basically won't even make their initial major. The number can be higher for STEM majors. That doesn't make sense, right? How are 18-year-olds supposed to know for certain what it is they want to study and do for the rest of their lives? They don't. Even the students who make it often have doubts and change careers later on. A survey by BestColleges.com suggests that 61% of college graduates would change their majors if they could go back (Johnson 2023).

Consider this additional idea from Zippa, "In the United States, people between 18 and 24 have an average of 5.7 career changes" (Boskamp 2023). We are going to change careers, a lot. Why are we pushing our young children into one-size-fits-all pathways, applying intense pressure, and then stressing them out to the max? That is happening in our colleges! This is especially bizarre when faculty members themselves have lifetime appointments.

To summarize, we are aggressively marketing plans to high school students, and telling them that these aggressive plans are ideal career choices. This is putting the cart before the horse. We should be developing communities of people who have the skillset to go on to exciting careers, and then working with students to arrange career choices and professional plans that match their evolving interests.

However, with some reworking and flexibility, we can turn these programs into agents of massive success for the future. We can do this by having a flexible agreement that allows students to build-in to finding the optimal career choice for them and their success as they grow and become more mature.

Is this too much pressure to put on our young adults? I could imagine someone commenting that in 1943, 1951, and 1971 we called up 18-year-old men through the draft, gave them guns, and told them to stand the line against the enemy. Many of them died. These were trying times for our nation. But let's not underestimate the difficulties that young adults face today when trying to make it. The stress is different, but still real and intense.

There are a number of stressors that have a real impact on students.

- **High GPA expectations coupled with grade inflation.** When everyone gets As and you slip up one semester, you are really far behind.
- **Student freedom and adulting.** In high school the schedule is completely structured from the time they get in to the time they leave. In college this is not the case. It can take some students years to figure this out. When kids aren't free, they don't do well when they are later given the freedom to do what they want. At least during an initial growth period.
- **Difficulty in assignments.** Students are assigned very complicated assignments that require considerable discussion, critical thinking, and time on task. There are plenty of easy outs: cheating and simply not doing it. When the material is so hard and cheating is comparatively so easy, it's hard to resist. Thus, getting students even further behind.
- **Imposter Syndrome.** This is the feeling that you do not belong in a particular discipline. This especially occurs with students who come from a different gender, race, class, or caste (or various combinations of those three) than the group in power.

Listen, when these stressors continually bombard students, it can add up, and wear students down! I see it every semester when good students come into my office crying, angry, contemplating dropping out or even suicide.

College ain't cheap!

College is likely going to put the average student into a giant pool of debt. Attending a very popular university like NYU is likely going to cost you $78k a year with room and board. Over four years, that's more than three hundred thousand dollars. That is the median sales price for a house in the United States. Most families store a large portion of their wealth in their homes, and a college education is nearly equivalent! That's unbelievable!

One could imagine the conversation between the student and parent on the first day of college could go as follows:

Parents: "Hey Little Bobby! We are betting big on ya this year! I bet $80K that you are going to win that race. Don't lose!"
Bobby gulps.
Parents: "I signed you up for mechanical engineering, you like making things, right?"
Bobby: "I like drawing"
Parents: "Mechanical engineers do a lot of drawing and they make a lot of money. Maureen's kid is a mechanical engineer."

Bobby gulps.
But then everyone walks away and tells Bobby to make it happen. "Hey Bobby don't mess up, right?"

This isn't necessarily true in the military. Soldiers are given clear instructions and they train for events over and over. In college you have to lead yourself, and not everyone is a natural leader. It isn't always easy to do and is a skill that needs to be learned. So, while a college student is unlikely to be continuously put into any physical harm, there are some serious stressors that can have a large impact on their lives. Mental health is a bigger deal than people outside of the situation appreciate.

I worry society has the wrong image of students. We might think that they are free to wander around and contemplate their futures. Most college students I know are struggling and constantly running from thing to thing, just trying to keep their heads above water. And in many cases, it's a struggle to just keep up.

When I started as a college professor focused on teaching, I expected to be teaching lazy college students who would roll out of their beds at 10:55 am to make it to their 11:00 am classes in their pajamas, half hung over from the party they attended last night. Isn't that the picture middle-aged folks envision?

That is not what I found at a mid-sized commuter school. I found students nicely dressed and wide awake. Many students got up before 7 am and were fighting through an hour of traffic just to get to campus. They stepped into my 11 am physics class ready to go. After coming to terms with this in my first semester of teaching college, I was forced to reevaluate my opinions of what it means to be a college student. It wasn't easy, because there was a lot of programming there.

It is true that at the higher levels of colleges and universities there still exists this student, who is smart, young, and carefree. But in much of America, being a college student means something else, and I am not even talking about the non-traditional student who goes back to school after some time in the job force.

Students from low-income communities cannot be carefree and be successful. Almost everyone has a full-time job and is expected to pay for needs such as books, transportation, etc. Many students, especially from historically minorized backgrounds, are expected to help out with the operation of their families. Yes, this can be babysitting. But at a deeper level it can be so much more. These older siblings can be effectively parents – missing out on college events because they have to attend things like parent teacher conferences for younger siblings. This has happened a surprising number of times. For some students it is not siblings but caregiving for

grandparents – likely to be a problem more and more as we get older and older as a society, with demographic shifts. These students' lives are not carefree. They are working hard with a ton of extra responsibilities that more elite college students don't have.

As if placing a double down bet against these students, those that come from poorer neighborhoods do not have the same preparation for college that wealthier students have. As a physics professor, I see this first-hand. In the mathematical sciences, exams are very unforgiving (there is an absolute right answer and a wrong answer) and success depends so heavily on the amount of preparation one has before coming to college. It seems that, although it pretends to be, nothing in education is equitable, from K-12 through to the college level.

Recently I have been visiting a lot of high schools to promote physics to younger students. A group of college students and I developed these fun, cute experiments. We lug all of our equipment to a high school for a day and hang out with the students while they do the experiments. It's super fun.

When you walk into a school in a wealthy school district you can feel it in the air. The halls are wide. There is a mix of student artwork and famous artwork on the walls. It is clean. There is a courtyard for students to freely walk through and hang out at picnic tables - I presume at lunch time, but it always seems to be happening. Students are actively taught in all of their classes. There are open-ended research classes where students can work on whatever project interests them. Students are encouraged to take AP classes and beyond. It feels like a mini-college. Some teachers literally have Ph.D.s or are working toward them in the evening. I bet their high school students do well in college.

Now compare that to a school in a low-income district. The first thing you notice when you walk in is the metal detectors. Is this school a pipeline to a good life, or to prison? You can feel the loss of freedom as soon as you walk through the doors and have to empty your pockets. The halls are crowded, chaotic, and their walls are bare. Instead of classrooms being an opportunity to express oneself and learn, they are prisons where the teachers are forced to spend significant time managing classroom behavior.

The teachers do the best that they can; however, they are limited by a host of factors. Each class has likely 30 or more students in it. And the students who need extra help often don't get it because there aren't enough resources. Teacher retention is low, partly because they leave as soon as they build up enough experience to move to higher paying jobs in wealthier school districts. So even if you do all of your homework and are a "good student," you are not going to get the same level of instruction. Is it 10% less, 25% less, 50% less? Obviously, that depends. But the key is that it adds

up over 13+ years of grade school. The students who come from struggling schools are not as well prepared for college as those who come from wealthier school districts – and it ain't even close.

On day one of college, all of the students from a variety of backgrounds pile into my physics class or maybe their English composition class. In their syllabus there is a social contract that tells students in the class what they'll be responsible for, the kinds of assignments, and what they'll need to learn. And all of that will be compiled into a letter grade in four months' time.

The students from wealthier backgrounds review the syllabus and notice that there is a remarkable overlap to a similar class they took in their junior year of high school. While they might be able to pass the class right now, if they had to take all of the exams, it would be ugly. However, that means that they are both ready to learn the new material and ready to dominate in the classroom. It is unsurprising when that student ends up with an A or a B in the class, with a reasonable amount of work.

Compare that to students from low-income schools. As they browse the syllabus they note that they haven't even seen the material before. They do not even have the necessary prerequisite knowledge to be successful in the class. Even if they work night and day in the class, they are likely going to just muster a passing grade, not the A they need to get into medical school. And oh yeah, they may miss a class during the first week of school because they have some family responsibilities that they have to attend.

This is one of the reasons I don't look at GPA when deciding who I want to work in my lab. In the 10 or so years I have had some of the best of my university's students in my lab. Really the best, like top five students in a year across the entire campus. And I have some students that have done poorly in classes. The big question that I ask is, will a research project encourage excitement with this student? And, is the student willing to learn? Listen, if they start getting excited about physics they will figure out all of the details on their own time. I have seen it happen over and over again. It's slower and messier than I would want. But they do get there. But if a student is genuinely excited and you shoot the student down, well they may never recover.

Consider, if a 17-year-old kid gets caught stealing something they will be charged as a minor and slapped on the wrist. Whereas an 18-year-old is an adult and likely will get a harsher penalty. Is there some major difference between a 17-year-old and an 18-year-old? No, it's an arbitrary distinction. We do the same with high school and college. We expect our high school students to have a broad picture of their life, they could be a musician, scientist, doctor, businessperson, etc. But then they get to college, and they

are supposed to immediately have everything figured out? It just doesn't make sense.

Mentoring these young minds is critical! We have to take the time to hear what students want and recognize that they are looking to us for help. We want students to dive into our community not run away from it. We have to be encouraging.

Getting too worked up over GPAs and not trying to connect to students and build them back up means we are failing to teach students. Listen, I am 48, have a Ph.D., am a tenured chair of an amazing department, have a stable job, am debt free, I am happily married to a beautiful brilliant wife, have an amazing wonderful kid, with a wonderful extended family, surrounded by the best friends a guy could want – and life is still hard for me. Imagine what it must be like for 20-year-old in debt who is unsure about the future. And let's not even talk about all of the other things that could affect success.

Defining What Is Meant by Local and Regional Schools?

Often in this book, I will talk about local and regional colleges and universities. In this section, I define what I mean by these groups of schools. Please keep in mind, this is not a black and white definition, there are many different kinds of colleges and universities throughout the United States.

When I speak of local and regional colleges and universities, I think about the college down the street. It's the college we interact with the most. The church I attended as a 10-year-old boy was on East 38th Street in Erie, PA. Directly across the street is Mercyhurst University. It is a small university with 2,700 students in it. I drove past it almost daily as a kid. In Erie, there were a number of colleges and universities that supported the community, including Gannon University, Edinboro University (PA), and a satellite campus of Penn State. Most of my friends and family attended these universities, if they decided to attend college. These weren't schools with football or basketball teams on the TV every week. These were the small schools in our community.

As a small boy growing up in a blue-collar town, my earliest interactions with these schools were sports related, whether it was following Gannon's successful division II basketball team, baseball camp at Mercyhurst, or the football game I attended at Edinboro. In high school, we were lucky to do some cool genetics experiences on Mercyhurst's campus, but for the most part these places were off limits and out of touch for me as a kid growing up – practically next store. And honestly, I really didn't have a thing for school when I was kid, so I would have likely stayed away anyway. (I was the kid who was taken out to the best restaurant in town for getting straight

Cs on my report card in sixth grade. My dad was so proud. Not an F or a D!)

The definition of what a college or a university is, from the public's point of view, varies a lot based on where you are from and your background. It is important to take a moment and talk about the differences. Certainly, there are elite schools like Harvard, Yale, and Stanford. Everyone views these as the best of the best. Attending one of these universities is likely going to set up you for success in life, but they are near possible to get into. And of course, there are semi-professional football teams that we watch on Saturday afternoons, which are also in fact universities. These large land grant schools such as Ohio State and Penn State are so big they are near cities themselves. While Mercyhurst has 2,700 students, Ohio State has 47,106 undergraduates. These large schools tend to have different business models; they rely on other sources of income.

While a large number of students attend these big universities, liberal arts colleges and universities are still the destination for a majority of Americans. In this book, we will focus on smaller colleges and universities that are not elite and do not have a worldwide following. These schools might have between 0 – 10,000 students. As with most things in life, it is difficult to draw an exact differential between the different types of colleges and universities. I am going break the schools down into three categories: the elite universities, the large research universities, and the smaller colleges and universities that support local and regional districts. While this book will discuss topics that are important to all classes of colleges and universities, we will focus mostly on the local and regional universities.

Over the last few years, the elite universities have fared well – garnering an increase in donations during the pandemic. The large research universities are focused on generating money through business partnerships and research grant projects. It's not to say that the pandemic hasn't negatively affected these institutions, it is just on a different scale than what is happening at the smaller schools whose funds come from taxpayer dollars and/or tuition. The pandemic brought about a drop in the number of students attending college. The pressure is keeping many students from attending college, and lowering the amount people are willing to pay. At the same time, the soaring cost of living is increasing and inflation has made university costs go up (faculty salaries, real estate, etc.). The result is that local and regional colleges and universities are under extreme financial pressure. There is also the enrollment cliff 2026, which is a sudden demographic switch affecting the number of students who will be attending college. Especially in northeast America, college enrollments will dip